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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,155	03/02/2004	Jesse Salb	04646.P007XC	4851

7590 02/26/2007
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EXAMINER

PERREIRA, MELISSA JEAN

ART UNIT	PAPER NUMBER
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1618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/792,155

Applicant(s)

SALB ET AL.

Examiner

Melissa Perreira

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 50-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 50-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/4/07.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 50-53 are pending in the application. Claims 51-53 are newly added in the response to office action filed 1/4/07.

Terminal Disclaimer

1. The terminal disclaimer filed on 1/4/07 has been recorded and approved
2. Any rejections from previous office actions that have not been reiterate in this office action are obviated.

Response to Arguments

3. Applicant's arguments, see response to office action, filed 1/4/07, with respect to ***Claim Rejections - 35 USC § 112*** in regards to the recitation of "said cellular target" have been fully considered and are persuasive. The rejections of claim 50 in regards to the recitation of "said cellular target" has been withdrawn.
4. Applicant's arguments, see response to office action, filed 1/4/07, with respect to ***Claim Rejections - 35 USC § 102*** in regards to Chien et al. (*Am. J. Physiol.* **1983**, 245, H693-H697) have been fully considered and are persuasive. The rejection of claim 50 has been withdrawn.
5. Applicant's arguments, see response to office action, filed 1/4/07, with respect to ***Claim Rejections - 35 USC § 103*** in regards to Shefer et al. (US 4,887,604) in view of Sovak et al. (US 4,243,653) have been fully considered and are persuasive. The rejection of claim 50 has been withdrawn.

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6. Applicant's arguments filed 1/4/07 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 50 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 50 recites "the L moiety is linked to said X moiety and to said S moiety, and inhibits steric hindrance" which does not define or limit the inhibitor or what the function of inhibiting steric hindrance applies to. The claim language is indefinite because it is not defined as to what is encompassed and can be described as any small or nonsterically hindered structure.

New Rejection as Necessitated by the Amendment which Now Includes the Newly

Added Claims

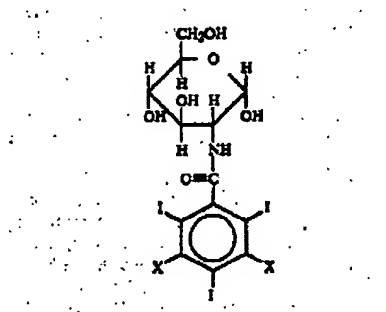
Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 50-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Bertoni (US 4,455,292).
12. Bertoni (US 4,455,292) discloses radiocontrast agent iodo-benzamido-glucopyranose such as metrizamide (below; column 2, lines 34+). The compounds described contain an iodine (K-absorption edge is 33.1 keV) substituted aryl moiety linked to a glucopyranose via an amide linker. Metrizamide and related iodo-benzamido-glucopyranose contrast agents have been shown to interfere with brain glucose metabolism by competitive inhibition of the enzyme hexokinase (abstract; column 1, lines 49-53; column 2, lines 10-13).



13. The contrast agent of the disclosure encompasses that of the instant claims as they contain the same function elements, should have the same properties, such as have a binding site for the intracellular target enzyme, hexokinase. Chemical compounds and their properties are inseparable. *In re Papesch*, 137 USPQ 43. The aryl substituent I inherently has a K-absorption edge of 33.1 keV that encompasses the K-absorption edge of the instant claims. Metrizamide is a competitive inhibitor of hexokinase which by definition is a molecule that binds to the enzyme and decreases its activity. Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable. Thus the

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claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable and does not render the old composition patentably new to the discoverer. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shefer et al. (US 4,887,604) in view of Bertoni (US 4,455,292).

16. Shefer et al. (US 4,887,604) disclosed an iodine contrast agents for energy subtraction or dual energy medical imaging system used to image a body part impregnated with a radio-opaque dye (column 2, lines 1-10; lines 50-53). The radio-opaque dye contains iodine which has a sharp K-edge at 33.16Kev (column 6, lines 47-52). Shefer et al. (US 4,887,604) does not disclose a pyranose or furanose substituted radio-opaque dye.

17. Bertoni (US 4,455,292) discloses radiocontrast agent iodo-benzamido-glucopyranose such as metrizamide as well as that listed above.

18. At the time of the invention it would have been obvious to one ordinarily skilled in the art to substitute the non-ionic iodo-benzamido-glucopyranose derivative contrast

media of Bertoni (US 4,455,292) for its ability to bind and inhibit hexokinase with the radio-opaque dye of Shefer et al. (US 4,887,604) that also contains an iodine substituent having a sharp K-edge of 33.16 keV for energy subtraction medical imaging methods.

Conclusion

No claims are allowed at this time.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

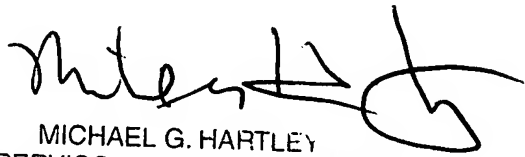
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Perreira whose telephone number is 571-272-1354. The examiner can normally be reached on 9am-5pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on 571-272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MP
February 14, 2007


MICHAEL G. HARTLEY
SUPERVISORY PATENT EXAMINER